

## Appendix I

Alignment of instant SEQ ID NO: 1 (nucleotides 1-780) with SEQ ID NO: 27 (plasmid pMG) of Perkins et al

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>lc1135931 SID_27
Length=5627

Score = 1019 bits (642), Expect = 0.0
Identities = 642/642 (100%), Gaps = 0/642 (0%)
Strand=Plus/Plus

Query 139   CGTTACATAA CTTACGGTAAATGGCCCGCCTGGCTGACCGCCCAACGACCCCCGCCCATTT 198
      |||
Sbjct 1248   CGTTACATAA CTTACGGTAAATGGCCCGCCTGGCTGACCGCCCAACGACCCCCGCCCATTT 1307

Query 199   GACGTCAATAATGACGTATGTTCCCATAGTAACGCCAATAGGGACTTTCCATTGACGTCA 258
      |||
Sbjct 1308   GACGTCAATAATGACGTATGTTCCCATAGTAACGCCAATAGGGACTTTCCATTGACGTCA 1367

Query 259   ATGGGTGGAGTATTTACGGTAAACTGCCCACTTGGCAGTACATCAAGTGTATCATATGCC 318
      |||
Sbjct 1368   ATGGGTGGAGTATTTACGGTAAACTGCCCACTTGGGAGTACATCAAGTGTATCATATGCC 1427

Query 319   AAGTACGCCCCCTATTGACGTCAATGACGGTAAATGGCCCGCCTGGCATTATGCCCASTA 378
      |||
Sbjct 1428   AAGTACGCCCCCTATTGACGTCAATGACGGTAAATGGCCCGCCTGGCATTATGCCCASTA 1487

Query 379   CATGACCTTATGGGACTTTCCCTACTTGGCAGTACATCTACGTATTAGTCATCGCTATTAC 438
      |||
Sbjct 1488   CATGACCTTATGGGACTTTCCCTACTTGGCAGTACATCTACGTATTAGTCATCGCTATTAC 1547

Query 439   CATGGTGATGCGGTTTGGCAGTACATCAATGGGCGTGGATAGCGGTTTGACTCAGCGGG 498
      |||
Sbjct 1548   CATGGTGATGCGGTTTGGCAGTACATCAATGGGCGTGGATAGCGGTTTGACTCAGCGGG 1607

Query 499   ATTTCCAAGTCTCCACCCCATTTGACGTCAATGGGAGTTTGTGTTTGGCACCAAAATCAACG 558
      |||
Sbjct 1608   ATTTCCAAGTCTCCACCCCATTTGACGTCAATGGGAGTTTGTGTTTGGCACCAAAATCAACG 1667

Query 559   GGACTTTCCAAAATGTCGTAACAACCTCCGCCCCATTGACGCAAAATGGGCGGTAGGCGTGT 618
      |||
Sbjct 1668   GGACTTTCCAAAATGTCGTAACAACCTCCGCCCCATTGACGCAAAATGGGCGGTAGGCGTGT 1727

Query 619   ACGGTGGGAGGTCTATATAAGCAGAGCTCGTTTAGTGAACCGTCAGATCGCCTGGAGACG 678
      |||
Sbjct 1728   ACGGTGGGAGGTCTATATAAGCAGAGCTCGTTTAGTGAACCGTCAGATCGCCTGGAGACG 1787

Query 679   CCATCCACGCTGTTTGGACCTCCATAGAAGACACCGGGACCGATCCAGCCTCCGCGGCCG 738
      |||
Sbjct 1788   CCATCCACGCTGTTTGGACCTCCATAGAAGACACCGGGACCGATCCAGCCTCCGCGGCCG 1847

Query 739   GGAACGGTGCATTGGAACGCGGATTCCCCGTGCCAAGAGTGA 780
      |||
Sbjct 1848   GGAACGGTGCATTGGAACGCGGATTCCCCGTGCCAAGAGTGA 1889
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